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ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CLASS II PERMIT

COMPANY: *Phelps Dodge Miami, Inc.*
FACILITY: *Miami Mine*
PERMIT #: *41526*
DATE ISSUED: *Draft*
EXPIRY DATE:

SUMMARY

This synthetic minor Class II renewal permit is issued to Phelps Dodge Miami, Inc., the Permittee, for operation of their Miami Mine facility at Miami, Gila County.

The facility consists of following primary activities:

1. Drilling and blasting
2. Loading
3. Ore and waste handling
4. Leaching
5. Solvent extraction
6. Electrowinning

The facility has the potential to emit, without controls, more than 100 tons per year (tpy) of nitrogen oxides (NO_x) and sulfur dioxide (SO₂) emissions. The Permittee has accepted voluntary operating limits to remain below major source threshold. While firing diesel or distillate oil in the boilers, the Permittee will use fuel with sulfur content less than **0.05** weight percent, and limit the annual cumulative hours of operations to **13000 hours**. Also, the facility will operate the emergency diesel generators for less than 500 hours in any rolling 12-month period.

This permit is issued in accordance with Arizona Revised Statutes (ARS) 49-426. It contains requirements from the Arizona Administrative Code, Title 18, Chapter 2 and Code of Federal Regulations 40 CFR 60.

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ATTACHMENT “A”: GENERAL PROVISIONS

**Air Quality Control Permit No. 41526
For
Phelps Dodge Miami, Inc.**

I. PERMIT EXPIRATION AND RENEWAL

[ARS § 49-426.F, A.A.C. R18-2-304.C.2, and -306.A.1]

- A.** This permit is valid for a period of five years from the date of issuance.
- B.** The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months, prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS

[A.A.C. R18-2-306.A.8.a and b]

- A.** The Permittee shall comply with all conditions of this permit including all applicable requirements of the Arizona air quality statutes and air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.
- B.** It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE

[A.A.C. R18-2-306.A.8.c, -321.A.1.c-d, and -321.A.2]

- A.** The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- B.** The permit shall be reopened and revised under any of the following circumstances
 - 1. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - 2. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.
- C.** Proceedings to reopen and reissue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings shall not result in a resetting of the five-year permit term.

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IV. POSTING OF PERMIT

[A.A.C. R18-2-315]

- A.** The Permittee shall post this permit or a certificate of permit issuance where the facility is located in such a manner as to be clearly visible and accessible. All equipment covered by this permit shall be clearly marked with one of the following:
 - 1. Current permit number; or
 - 2. Serial number or other equipment ID number that is also listed in the permit to identify that piece of equipment.
- B.** A copy of the complete permit shall be kept on site.

V. FEE PAYMENT

[A.A.C. R18-2-306.A.9 and -326]

The Permittee shall pay fees to the Director pursuant to ARS § 49-426(E) and A.A.C. R18-2-326.

VI. ANNUAL EMISSION INVENTORY QUESTIONNAIRE

[A.A.C. R18-2-327.A and B]

- A.** The Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31st or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.
- B.** The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

VII. COMPLIANCE CERTIFICATION

[A.A.C. R18-2-309.2.a, -309.2.c-d, and -309.5.d]

- A.** The Permittee shall submit a compliance certification to the Director semiannually which describes the compliance status of the source with respect to each permit condition. The first certification shall be submitted no later than May 15th, and shall report the compliance status of the source during the period between October 1st of the previous year and March 31st of the current year. The second certification shall be submitted no later than November 15th, and shall report the compliance status of the source during the period between April 1st and September 30th of the current year.

The compliance certifications shall include the following:

- 1. Identification of each term or condition of the permit that is the basis of the certification;
- 2. The Identification of the methods or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period;
- 3. The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the methods or means designated in Condition VII.A.2 above. The certifications shall identify each deviation and take it into account for consideration in the compliance certification;

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4. All instances of deviations from permit requirements reported pursuant to Condition XII.B of this Attachment; and
 5. Other facts the Director may require determining the compliance status of the source.
- B.** A progress report on all outstanding compliance schedules shall be submitted every six months beginning with six months after permit issuance.

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

[A.A.C. R18-2-304.H]

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

IX. INSPECTION AND ENTRY

[A.A.C. R18-2-309.4]

Upon presentation of proper credentials, the Permittee shall allow the Director or the authorized representative of the Director to:

- A.** Enter upon the Permittee's premises where a source is located, emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
- B.** Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
- C.** Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- D.** Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
- E.** Record any inspection by use of written, electronic, magnetic and photographic media.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD

[A.A.C. R18-2-304.C]

If this source becomes subject to a standard promulgated by the Administrator pursuant to Section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

XI. ACCIDENTAL RELEASE PROGRAM

[40 CFR Part 68]

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply with these provisions according to the time line specified in 40 CFR Part 68.

XII. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING

A. Excess Emissions Reporting

[A.A.C. R18-2-310.01.A and -310.01.B]

1. Excess emissions shall be reported as follows:
 - a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:
 - (1) Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from Condition XII.A.1.b below.
 - (2) Detailed written notification by submission of an excess emissions report within 72 hours of the notification pursuant to Condition XII.A.1.a.(1) above.
 - b. The report shall contain the following information:
 - (1) Identity of each stack or other emission point where the excess emissions occurred;
 - (2) Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
 - (3) Date, time and duration, or expected duration, of the excess emissions;
 - (4) Identity of the equipment from which the excess emissions emanated;
 - (5) Nature and cause of such emissions;
 - (6) If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions; and
 - (7) Steps taken to limit the excess emissions. If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with the permit procedures.
2. In the case of continuous or recurring excess emissions, the notification requirements of this section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period, or changes in the nature of the emissions as originally reported, shall require additional notification pursuant to Condition XII.A.1 above.

[A.A.C. R18-2-310.01.C]

B. Permit Deviations Reporting

[A.A.C. R18-2-306.A.5.b]

The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the

report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to an emergency or within two working days of the time when the owner or operator first learned of the occurrence of a deviation from a permit requirement.

C. Emergency Provision

[A.A.C. R18-2-306.E]

- 1 An “emergency” means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
- 2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if Condition XII.C.3 is met.
3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the Permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was being properly operated at the time;
 - c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. The Permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. Compliance Schedule

[ARS § 49-426.I.5]

For any excess emission or permit deviation that cannot be corrected with 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated.

E. Affirmative Defenses for Excess Emissions Due to Malfunctions, Startup, and Shutdown

[A.A.C. R18-2-310]

1. Applicability

This rule establishes affirmative defenses for certain emissions in excess of an emission standard or limitation and applies to all emission standards or limitations except for standards or limitations:

- a. Promulgated pursuant to Sections 111 or 112 of the Act;
- b. Promulgated pursuant to Titles IV or VI of the Clean Air Act;
- c. Contained in any Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the U.S. EPA;
- d. Contained in A.A.C. R18-2-715.F; or
- e. Included in a permit to meet the requirements of A.A.C. R18-2-406.A.5.

2. Affirmative Defense for Malfunctions

Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. When emissions in excess of an applicable emission limitation are due to a malfunction, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:

- a. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the Permittee;
- b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
- c. If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the Permittee satisfactorily demonstrated that the measures were impracticable;
- d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
- e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
- f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
- g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article

2 of the Arizona Administrative Code that could be attributed to the emitting source;

- h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;
- i. All emissions monitoring systems were kept in operation if at all practicable; and
- j. The Permittee's actions in response to the excess emissions were documented by contemporaneous records

3. Affirmative Defense for Startup and Shutdown

a. Except as provided in Condition XII.E.3.b below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. When emissions in excess of an applicable emission limitation are due to startup and shutdown, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:

- (1) The excess emissions could not have been prevented through careful and prudent planning and design;
- (2) If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;
- (3) The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
- (4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
- (5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
- (6) During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;
- (7) All emissions monitoring systems were kept in operation if at all practicable; and
- (8) Contemporaneous records documented the Permittee's actions in response to the excess emissions.

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- b. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to Condition XII.E.2 above.

4. Affirmative Defense for Malfunctions During Scheduled Maintenance

If excess emissions occur due to a malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to Condition XII.E.2 above.

5. Demonstration of Reasonable and Practicable Measures

For an affirmative defense under Condition XII.E.2 or XII.E.3 above, the Permittee shall demonstrate, through submission of the data and information required by Condition XII.E and A.A.C. R18-2-310.01, that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of the excess emissions.

XIII. RECORD KEEPING REQUIREMENTS

[A.A.C. R18-2-306.A.4]

- A. The Permittee shall keep records of all required monitoring information including, but not limited to, the following:
 - 1. The date, place as defined in the permit, and time of sampling or measurements;
 - 2. The date(s) analyses were performed;
 - 3. The name of the company or entity that performed the analyses;
 - 4. A description of the analytical techniques or methods used;
 - 5. The results of such analyses; and
 - 6. The operating conditions as existing at the time of sampling or measurement.
- B. The Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
- C. All required records shall be maintained either in an unchangeable electronic format or in a handwritten logbook utilizing indelible ink.

XIV. REPORTING REQUIREMENTS

[A.A.C. R18-2-306.A.5.a]

The Permittee shall submit the following reports:

- A. Compliance certifications in accordance with Section VII of Attachment "A".
- B. Excess emission; permit deviation, and emergency reports in accordance with Section XII of Attachment "A".
- C. Other reports required by any condition of Attachment "B".

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XV. DUTY TO PROVIDE INFORMATION

[A.A.C. R18-2-304.G and -306.A.8.e]

- A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.
- B. If the Permittee has failed to submit any relevant facts or has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

XVI. PERMIT AMENDMENT OR REVISION

[A.A.C. R18-2-317.01, -318, -319, and -320]

The Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under Section XVII, as follows:

- A. Facility Changes that Require a Permit Revision - Class II (A.A.C. R18-2-317.01);
- B. Administrative Permit Amendment (A.A.C. R18-2-318);
- C. Minor Permit Revision (A.A.C. R18-2-319); and
- D. Significant Permit Revision (A.A.C. R18-2-320)

The applicability and requirements for such action are defined in the above referenced regulations.

XVII. FACILITY CHANGE WITHOUT A PERMIT REVISION

[A.A.C. R18-2-306.A.4 and -317.02]

- A. Except for a physical change or change in the method of operation at a Class II source requiring a permit revision under A.A.C. R18-2-317.01, or a change subject to logging or notice requirements in Conditions XVII.B and XVII.C below, a change at a Class II source shall not be subject to revision, notice, or logging requirements under this Section.
- B. Except as otherwise provided in the conditions applicable to an emissions cap created under A.A.C. R18-2-306.02, the following changes may be made if the source keeps on site records of the changes according to Appendix 3 of the Arizona Administrative Code:
 - 1. Implementing an alternative operating scenario, including raw materials changes;
 - 2. Changing process equipment, operating procedures, or making any other physical change if the permit requires the change to be logged;
 - 3. Engaging in any new insignificant activity listed in A.A.C. R18-2-101.57.a through A.A.C. R18-2-101.57.i but not listed in the permit;
 - 4. Replacing an item of air pollution control equipment listed in the permit with an identical (same model, different serial number) item. The Director may require verification of efficiency of the new equipment by performance tests; and

5. A change that results in a decrease in actual emissions if the source wants to claim credit for the decrease in determining whether the source has a net emissions increase for any purpose. The logged information shall include a description of the change that will produce the decrease in actual emissions. A decrease that has not been logged is creditable only if the decrease is quantifiable, enforceable, and otherwise qualifies as a creditable decrease.

C. Except as provided in the conditions applicable to an emissions cap created under A.A.C. R18-2-306.02, the following changes may be made if the source provides written notice to the Department in advance of the change as provided below:

1. Replacing an item of air pollution control equipment listed in the permit with one that is not identical but that is substantially similar and has the same or better pollutant removal efficiency: 7 days. The Director may require verification of efficiency of the new equipment by performance tests;
2. A physical change or change in the method of operation that increases actual emissions more than 10% of the major source threshold for any conventional pollutant but does not require a permit revision: 7 days;
3. Replacing an item of air pollution control equipment listed in the permit with one that is not substantially similar but that has the same or better efficiency: 30 days. The Director may require verification of efficiency of the new equipment by performance tests;
4. A change that would trigger an applicable requirement that already exists in the permit: 30 days unless otherwise required by the applicable requirement;
5. A change that amounts to reconstruction of the source or an affected facility: 7 days. For the purposes of this subsection, reconstruction of a source or an affected facility shall be presumed if the fixed capital cost of the new components exceeds 50% of the fixed capital cost of a comparable entirely new source or affected facility and the changes to the components have occurred over the 12 consecutive months beginning with commencement of construction; and
6. A change that will result in the emissions of a new regulated air pollutant above an applicable regulatory threshold but that does not trigger a new applicable requirement for that source category: 30 days. For purposes of this requirement, an applicable regulatory threshold for a conventional air pollutant shall be 10% of the applicable major source threshold for that pollutant.

D. For each change under Condition XVII.C above, the written notice shall be by certified mail or hand delivery and shall be received by the Director the minimum amount of time in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided with less than required notice, but must be provided as far in advance of the change, or if advance notification is not practicable, as soon after the change as possible. The written notice shall include:

1. When the proposed change will occur;
2. A description of the change;
3. Any change in emissions of regulated air pollutants; and
4. Term or condition that is no longer applicable as a result of the change.

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- E.** A source may implement any change in Condition XVII.C above without the required notice by applying for a minor permit revision under A.A.C. R18-2-319 and complying with subsection A.A.C. R18-2-319.D.2 and A.A.C. R18-2-319.G.
- F.** The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section, other than implementation of an alternate operating scenario under Condition XVII.B.1.
- G.** Notwithstanding any other part of this Section, the Director may require a permit to be revised for any change that, when considered together with any other changes submitted by the same source under this Section over the term of the permit, constitutes a change under subsection A.A.C. R18-2-317.01.A.
- H.** If a source change is described under both Conditions XVII.B and XVII.C above, the source shall comply with Condition XVII.C above. If a source change is described under both Condition XVII.C above and A.A.C. R18-2-317.01.B, the source shall comply with A.A.C. R18-2-317.01.B.
- I.** A copy of all logs required under Condition XVII.B shall be filed with the Director within 30 days after each anniversary of the permit issuance date. If no changes were made at the source requiring logging, a statement to that effect shall be filed instead.
- J. Logging Requirements**

[A.A.C. R18-2-306.A.4]

1. Each log entry required by a change under Condition XVII.B shall include at least the following information:
 - a. A description of the change, including:
 - (1) A description of any process change;
 - (2) A description of any equipment change, including both old and new equipment descriptions, model numbers, and serial numbers, or any other unique equipment ID number; and
 - (3) A description of any process material change.
 - b. The date and time that the change occurred.
 - c. The provision of A.A.C. R18-2-317.02.B that authorizes the change to be made with logging.
 - d. The date the entry was made and the first and last name of the person making the entry.
2. Logs shall be kept for 5 years from the date created. Logging shall be performed in indelible ink in a bound log book with sequentially number pages, or in any other form, including electronic format, approved by the Director.

XVIII. TESTING REQUIREMENTS

[A.A.C. R18-2-312]

- A.** The Permittee shall conduct performance tests as specified in the permit and at such other times as may be required by the Director.

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B. Operational Conditions During Testing

Tests shall be conducted during operation at the maximum possible capacity of each unit under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during periods of start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.

C. Tests shall be conducted and data reduced in accordance with the test methods and procedures contained in the Arizona Testing Manual unless modified by the Director pursuant to A.A.C. R18-2-312.B.

D. Test Plan

At least 14 calendar days prior to performing a test, the Permittee shall submit a test plan to the Director in accordance with A.A.C. R18-2-312.B and the Arizona Testing Manual. This test plan must include the following:

1. Test duration;
2. Test location(s);
3. Test method(s); and
4. Source operation and other parameters that may affect test results.

E. Stack Sampling Facilities

The Permittee shall provide, or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;
2. Safe sampling platform(s);
3. Safe access to sampling platform(s); and
4. Utilities for sampling and testing equipment.

F. Interpretation of Final Results

Each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs is required to be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control, compliance may, upon the Director's approval, be determined using the arithmetic mean of the results of the other two runs. If the Director or the Director's designee is present, tests may only be stopped with the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be stopped for good cause. Good cause includes: forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control. Termination of any test

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without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation, which demonstrates good cause, must be submitted.

G. Report of Final Test Results

A written report of the results of all performance tests shall be submitted to the Director within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

XIX. PROPERTY RIGHTS

[A.A.C. R18-2-306.A.8.d]

This permit does not convey any property rights of any sort, or any exclusive privilege.

XX. SEVERABILITY CLAUSE

[A.A.C. R18-2-306.A.7]

The provisions of this permit are severable. In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force.

XXI. PERMIT SHIELD

[A.A.C. R18-2-325]

Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements identified in the portions of this permit subtitled "Permit Shield". The permit shield shall not apply to any minor revisions pursuant to Condition XVI.C of this Attachment and any facility changes without a permit revision pursuant to Section XVII of this Attachment.

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ATTACHMENT “B”: SPECIFIC CONDITIONS

Air Quality Control Permit No. 41526
For
Phelps Dodge Miami, Inc.

I. FACILITY WIDE REQUIREMENTS

A. Operating Limitations

1. The Permittee shall have on site or on-call a person certified in EPA Reference Method 9. [A.A.C. R18-2-306.A.3.c]
2. The Permittee shall operate all equipment identified in Attachment “C” in accordance with vendor-supplied operations and maintenance instructions. If vendor-supplied operations and maintenance instructions are not available, the Permittee shall prepare an Operation and Maintenance Plan, which provides adequate information to properly operate and maintain the these equipment in good working order. In the absence of vendor-supplied operations and maintenance instructions, the Permittee shall operate the equipment in accordance with the Operation and Maintenance Plan. [A.A.C. R18-2-306.A.2]
3. Operating Hours Limitations
 - a. *While firing diesel or distillate oil, the Permittee shall operate Tankhouse Boilers 1, 2 and 3 for no more than 13000 hours per year on a cumulative, twelve-month rolling total.* [A.A.C. R18-2-306.01.A, and A.A.C. R18-2-331.A.3.a]
[Material permit conditions are indicated by underline and italics]
 - b. *The Permittee shall not operate any emergency diesel generator for more than 500 hours per year, based on a twelve month rolling total.*
[A.A.C. R18-2-306.01.A, and A.A.C. R18-2-331.A.3.a]
[Material Permit Condition is indicated by underline and italics]

B. Monitoring, Recordkeeping and Reporting Requirements

1. The Permittee shall keep daily records of the number of hours of operation of Tankhouse Boilers 1, 2, and 3 with diesel or distillate oil as fuel. [A.A.C. R18-2-306.A.3.c]
2. The Permittee shall keep records of monthly totals of the hours of operation of Tankhouse Boilers 1, 2, and 3 with diesel or distillate oil as fuel. At the end of each month, the Permittee shall calculate and record a cumulative, rolling 12-month total of the hours of operation of Tankhouse Boilers 1, 2, and 3 with diesel or distillate oil as fuel. [A.A.C. R18-2-306.A.3.c]
3. The Permittee shall keep records of monthly totals of the hours of operation of each emergency diesel generator. At the end of each month, the Permittee shall calculate and record a rolling 12-month total of the hours of operation. [A.A.C. R18-2-306.A.3.c]
4. The Permittee shall maintain, on-site, records of the manufacturer's specifications or Operation and Maintenance Plan for minimizing emissions for all process and control equipment listed in Attachment “C”. These shall be available to ADEQ upon request. [A.A.C. R18-2-306.A.4]

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5. The Permittee shall submit reports of all monitoring activities required in Attachment “B” along with the compliance certifications required by Section VII of Attachment “A.” [A.A.C. R18-2-306.A.5]

II. TANK HOUSE BOILERS 1 AND 2 (NON-NSPS)

A. Applicability

This section applies to Tankhouse Boilers 1 and 2.

B. Fuel Limitations

1. The Permittee shall only fire natural gas or diesel or low sulfur distillate oil (with maximum sulfur content not exceeding 0.05% percent by weight) as fuel. [A.A.C. R18-2-306.01 and A.A.C. R18-2-331.A.3.a]
[Material permit conditions are indicated by underline and italics]
2. The Permittee shall keep records of fuel supplier certifications to demonstrate compliance with the sulfur content limit. These records shall be made available to ADEQ upon request. [A.A.C. R18-2-306.A.3.c]

C. Particulate Matter and Opacity

1. Emissions Limitations and Standards

- a. The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel from Boiler #1 and #2 into the atmosphere in excess of the amounts calculated by the following equation:

$$E = 1.02 Q^{0.769}$$

Where

E = the maximum allowable particulate emission rate in pounds-mass per hour

Q = the heat input in million Btu per hour

[A.A.C. R18-2-724.C.1]

- b. For purposes of this Section, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The total heat input of all fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of particulate matter, which may be emitted. [A.A.C. R18-2-724.B]

- c. The Permittee shall not cause, allow or permit the opacity of any plume or effluent from any boiler to exceed 15%. [A.A.C. R18-2-724.J]

2. Monitoring, Recordkeeping, and Reporting Requirements

- a. While firing natural gas in the boilers, the Permittee shall maintain a record of the daily lower heating value of the natural gas, along with natural gas firing rate. [A.A.C. R18-2-306.A.3.c]
- b. While firing diesel or distillate oil in the boilers, the Permittee shall keep

records of fuel supplier certifications and fuel firing rates. In addition, while firing distillate oil, the Permittee shall maintain records of the contractual agreement with the liquid fuel vendor, containing heating value of the fuel.

[A.A.C. R18-2-306.A.3.c]

- c. A certified EPA Reference Method 9 observer shall conduct a bi-weekly (once in two weeks) survey of visible emissions emanating from the stack of each boiler. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation shows a Method 9 opacity reading in excess of 15%, the Permittee shall initiate appropriate corrective action to reduce the opacity below 15%. The Permittee shall keep a record of the corrective action performed. [A.A.C. R18-2-306.A.3.c]
- d. The Permittee shall report all 6-minute periods during which the visible emissions exceed 15 percent opacity, as required under Section XII of Attachment "A". [A.A.C. R18-2-724.J]

3. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-724.B, A.A.C R18-2-724.C.1, and A.A.C R18-2-724.J. [A.A.C. R18-2-325]

D. Sulfur Dioxide

1. Emission Limitations and Standards

The Permittee shall not emit or cause to emit more than 1.0 pound of sulfur dioxide per million Btu. [A.A.C. R18-2-724.E]

2. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-724.E. [A.A.C. R18-2-325]

III. TANKHOUSE BOILER 3 (NSPS)

A. Applicability

This section applies to the Tankhouse Boiler No. 3.

B. General Provisions

The following requirements apply to the operation, maintenance, recordkeeping and reporting in accordance with 40 CFR Part 60, Subpart A – General Provisions.

- 1. The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [40 CFR 60.7(b)]

2. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate Tankhouse Boiler No.3 in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[40 CFR 60.11(d), A.A.C. R18-2-331.A.3.e]

[Material permit conditions are indicated by underline and italics]

3. For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any standard in 40 CFR Part 60, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [40 CFR 60.11(g)]
4. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission, which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with opacity standard or with a standard, which is based on the concentration of a pollutant in the gases discharged to the atmosphere. [40 CFR 60.12]
5. The Permittee shall comply with the “General Notification and Reporting Requirements” found in 40 CFR 60.19. [40 CFR 60.19]

C. Fuel Limitation

1. Operation Limitation

The Permittee shall burn either natural gas, diesel or distillate oil as fuel in tankhouse boiler 3.

[A.A.C. R18-2-306.A.2]

2. Monitoring, Recordkeeping and Reporting Requirements

The Permittee shall maintain records of the amount of fuel combusted each day. These records shall be maintained for a period of two years following the date of such record.

[A.A.C. R18-2-901.5, 40 CFR 60.48c(g), 40 CFR 60.48c(i)]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with the requirements of 40 CFR 60.48c(g), 40 CFR 60.48c(i) and A.A.C. R18-2-901.5.

[A.A.C. R18-2-325]

D. Opacity

1. Emission Limitations and Standards

While firing diesel/distillate oil, Permittee shall limit the discharge into the atmosphere of any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity, as measured by

EPA Reference Method 9. This opacity standard applies at all times except during periods of startup, shutdown, and malfunction.

[A.A.C. R18-2-901.5, 40 CFR 60.43c(c), 40 CFR 60.43c(d), and A.A.C. R18-2-331.A.3.a]
[Material permit conditions are indicated by underline and italics]

2. Monitoring, Reporting, and Recordkeeping

A certified EPA Reference Method 9 observer shall conduct a bi-weekly (one in two weeks) survey of visible emissions emanating from the boilers, when in operation. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition.D.1 above, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XI.A.1 of Attachment "A". [A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with the requirements of A.A.C. R18-2-901.5, 40 CFR 60.43c(c), and 40 CFR 60.43c(d). [A.A.C. R18-2-325]

E. Sulfur Dioxide

1. Emission Limitations and Standards

- a. Permittee shall not combust diesel or distillate oil that contains greater than **0.05%** sulfur by weight. The oil sulfur limit applies at all times, including periods of startup, shutdown, and, malfunction. [A.A.C. R18-2-901.5, 40 CFR 60.42c(d), 40 CFR 60.42c(i)]
- b. Compliance with the fuel oil sulfur limits under Condition E.1.a above shall be determined based on a certification from the fuel supplier, as described under Condition III.E.2.b. [A.A.C. R18-2-901.5, 40 CFR 60.45c(h)(1)]

2. Monitoring, Recordkeeping, and Reporting Requirements

- a. The Permittee shall keep records and submit reports of fuel oil certifications every 6 months. All reports shall be submitted to the EPA Administrator and ADEQ Director and shall be postmarked by the 30th day following the end of the reporting period. [A.A.C. R18-2-901.5, 40 CFR 60.48c(e), 40 CFR 60.48c(j)]
- b. The reports shall include the following information
 - i. Calendar dates covered in the reporting period;
 - ii. The name of the oil supplier; and
 - iii. For distillate oil, a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c.
 - iv. A certified statement signed by the Permittee that the records of fuel supplier certifications submitted represent all of the fuel combusted

during the 6-month period.

[A.A.C. R18-2-901.5, 40 CFR 60.48c(e), 40 CFR 60.48c(f)(1)]

- c. The Permittee shall maintain all records required under this section for a period of two years following the date of such record. [40 CFR 60.46c(i)]

3. Permit Shield

Compliance with conditions of this Part shall be deemed compliance with the requirements of A.A.C. R18-2-901.5, 40 CFR 60.42c(d), 40 CFR 60.42c(i), 40 CFR 60.45c(h)(1), 40 CFR 60.46c(e), 40 CFR 60.48c(e), 40 CFR 60.48c(j), 40 CFR 60.48c(f)(1), 40 CFR 60.48c(j), and 40 CFR 60.46c(i). [A.A.C. R18-2-325]

IV. MISCELLANEOUS FUEL BURNING EQUIPMENT

A. Applicability

This section applies to the Propane Hot Water Heater, Lead Melting Pot and other miscellaneous space heaters & water heaters.

B. Operating Limitations

- 1. The Permittee shall only fire low sulfur fuel in the lead melting pot at the electrowinning tankhouse. The sulfur content of the fuel shall not exceed 0.05% by weight. [A.A.C. R18-2-306.01.A, A.A.C. R18-2-331.A.3.a]
- 2. The Permittee shall use only propane or natural gas in the propane hot water heater and miscellaneous space heaters & water heaters. [A.A.C. R18-2-306.A.2]
- 3. The Permittee shall not melt more than 4000 pounds of lead per year in the lead melting pot, based on a twelve month rolling total [A.A.C. R18-2-306.01.A, and A.A.C. R18-2-331.A.3.a] [Material Permit Condition is indicated by underline and italics]

C. Particulate Matter and Opacity

1. Emissions Limitations and Standards

- a. The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from any fuel-burning operation into the atmosphere in excess of the amounts calculated by the following equation:

$$E = 1.02 Q^{0.769}$$

Where

E = the maximum allowable particulate emission rate in pounds-mass per hour

Q = the heat input in million Btu per hour

[A.A.C. R18-2-724.C.1]

- b. For purposes of this Section, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The total heat input of all fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of particulate matter,

which may be emitted. [A.A.C. R18-2-724.B]

- c. The Permittee shall not cause, allow or permit the opacity of any plume or effluent from any boiler to exceed 15%. [A.A.C. R18-2-724.J]

2. Monitoring, Recordkeeping, and Reporting

- a. The Permittee shall keep records of fuel supplier certifications, or the contractual agreement with the liquid fuel vendor. These records shall be made available to ADEQ upon request. [A.A.C. R18-2-306.A.3.c]

- b. The Permittee shall keep records of monthly totals of the lead melted in the lead melting pot. At the end of each month, the Permittee shall calculate and record a rolling 12-month total of lead melted. [A.A.C. R18-2-306.A.3.c]

- c. A certified EPA Reference Method 9 observer shall conduct a semi-annual (once every six months) survey of visible emissions emanating from the propane hot water heater and the lead melting pot. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation shows a Method 9 opacity reading in excess of 15%, the Permittee shall initiate appropriate corrective action to reduce the opacity below 15%. The Permittee shall keep a record of the corrective action performed. [A.A.C. R18-2-306.A.3.c]

- d. The Permittee shall report all 6-minute periods during which the visible emissions exceed 15 percent opacity, as required under Section XII of Attachment "A". [A.A.C. R18-2-724.J]

3. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-724.B, A.A.C R18-2-724.C.1, and A.A.C R18-2-724.J. [A.A.C. R18-2-325]

D. Sulfur Dioxide

1. Emission Limitations and Standards

The Permittee shall not emit or cause to emit more than 1.0 pound of sulfur dioxide per million Btu. [A.A.C. R18-2-724.E]

2. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-724.E. [A.A.C. R18-2-325]

V. EMERGENCY DIESEL GENERATORS

A. Applicability

This Section applies to the emergency diesel generators listed in Attachment "C" of this permit.

B. Fuel Limitations

1. The Permittee shall only fire low sulfur diesel (less than 0.9 percent by weight of sulfur) fuel in the emergency diesel generators. [A.A.C. R18-2-719.H]

2. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-719.H. [A.A.C. R18-2-325]

C. Particulate Matter and Opacity

1. Emissions Limitations and Standards

a. The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from any emergency diesel generator into the atmosphere in excess of the amounts calculated by the following equation:

$$E = 1.02 Q^{0.769}$$

Where

E = the maximum allowable particulate emission rate in pounds-mass per hour

Q = the heat input in million Btu per hour

[A.A.C. R18-2-719.C.1]

b. For purposes of this Section, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The total heat input of all operating fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of particulate matter, which may be emitted. [A.A.C. R18-2-719.B]

c. Opacity

i. The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any emergency diesel generator, smoke for any period greater than 10 consecutive seconds, which exceeds 40% opacity. [A.A.C. R18-2-719.E]

ii. Visible emissions when starting cold equipment shall be exempt from this requirement for the first 10 minutes. [A.A.C. R18-2-719.E]

2. Monitoring, Record keeping, and Reporting Requirements

a. The Permittee shall keep records of fuel supplier certifications. The certification shall contain information regarding the name of fuel supplier and lower heating value of the fuel. These records shall be made available to ADEQ upon request. [A.A.C. R18-2-306.A.3.c]

b. For every 100 hours of operation, a certified EPA Reference Method 9 observer shall conduct a survey of visible emissions emanating from the stack of the diesel generators. If the opacity of the emissions observed appears to exceed

the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, name of observer, date and time of observation, and the results of the observation. If the observation results in a Method 9 opacity reading in excess of 40%, the Permittee shall report this to ADEQ as excess emission and initiate appropriate corrective action to reduce the opacity below 40%. The Permittee shall keep a record of the corrective action performed. [A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-719.C.1 and A.A.C. R18-2-719.E. [A.A.C. R18-2-325]

D. Sulfur Dioxide

1. Emission Limitations and Standards

The Permittee shall not emit or cause to emit more than 1.0 pound of sulfur dioxide per million Btu. [A.A.C. R18-2-719.F]

2. Monitoring, Recordkeeping, and Reporting

a. The Permittee shall keep daily records of the sulfur content and lower heating value of the fuel being fired in the diesel generators. The Permittee shall keep records of fuel supplier certifications to demonstrate compliance. These records shall be made available to ADEQ upon request. [A.A.C. R18-2-306.A.3.c and -719.I]

b. The Permittee shall report to the Director any daily period during which the sulfur content of the fuel being fired in the emergency diesel generators exceeds 0.8%. [A.A.C. R18-2-719.J]

3. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-719.F, A.A.C. R18-2-719.I, and A.A.C. R18-2-719.J. [A.A.C. R18-2-325]

VI. SOLUTION EXTRACTION/ELECTROWINNING PROCESS (SX/EW), AND MISCELLANEOUS STORAGE TANKS

This Section is applicable to all the unclassified sources such as SX/EW plant, and miscellaneous storage tanks listed in the equipment list in Attachment "C".

A. Particulate Matter

1. Emission Limitation and Standards

a. The Permittee shall not cause or permit the emissions of particulate matter discharged into the atmosphere in any one hour from the miscellaneous storage tanks in total quantities in excess of the amounts calculated by one of the following equations:

- i. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

- ii. For process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0P^{0.11} - 40$$

where "E" and "P" are defined as indicated in i above.

[A.A.C. R18-2-730.A.1]

- b. For purposes of this Section, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter. [A.A.C. R18-2-730.B]

2. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-730.A and B. [A.A.C. R18-2-325]

B. Opacity

1. Emission Limitation and Standards

The opacity of any emissions from the SX/EW plant, and storage tanks shall not be greater than 20 percent. [A.A.C. R18-2-702.B]

2. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-702.B. [A.A.C. R18-2-325]

C. Volatile Organic Compounds (VOCs) and Other Miscellaneous Emissions

1. Emission Limitation and Standards

- a. The Permittee shall not cause or permit the emission of gaseous or odorous materials from equipment and operations associated with the SX/EW process in such quantities or concentrations as to cause air pollution. [A.A.C. R18-2-730.D]

- b. Materials including solvents or other volatile compounds, paints, acids, alkalis, and other chemicals utilized in the SW/EX process shall be processed, stored, used, and transported in such a manner and by means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so as to

cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices, or equipment shall be mandatory. [A.A.C. R18-2-730.F]

- c. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the owner or operator thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property. [A.A.C. R18-2-730.G]

2. Air Pollution Control Requirements

- a. The Permittee shall install, maintain and use covers on the mixer settler tanks to control emissions from the Solution Extraction Plant.

[A.A.C. R18-2-306.A.2 and -331.A.3.d and e]

[Material permit conditions are indicated by underline and italics]

- b. The Permittee shall use one or more of the following methods to control emissions from the Electrowinning Tankhouse:

- i. Foam

- ii. Blankets

- iii. Surfactants

- iv. Thermal retention balls

- v. Other effective means of controlling sulfuric acid emissions approved by the Director.

[A.A.C. R18-2-306.A.2 and -331.A.3.e]

[Material permit conditions are indicated by underline and italics]

3. Monitoring, Reporting and Recordkeeping Requirements

The Permittee shall maintain a record of all control measures used to limit emissions from the SX/EW process. [A.A.C. R18-2-306.A.3.c]

4. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with the following applicable provisions as of the issuance date of this permit: A.A.C. R18-2-730.D, F, G and J. [A.A.C. R18-2-325]

VII. GASOLINE STORAGE TANKS

A. Applicability

This Section is applicable to the two gasoline storage tanks listed in the equipment list in Attachment "C"

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B. Operating Limitations

1. Operational Requirements

- a. Gasoline storage tank shall be equipped with a submerged filling device or acceptable equivalent, for control of hydrocarbon emissions. [A.A.C. R18-2-710.B]
- b. All pumps and compressors that handle gasoline shall be equipped with mechanical seals or other equipment of equal efficiency to prevent release of organic contaminants into the atmosphere. [A.A.C. R18-2-710.D]

2. Monitoring and recordkeeping requirements

- a. The Permittee shall, for the gasoline storage tank, maintain a file, of the typical Reid vapor pressure of gasoline stored and of dates of storage. Dates on which the storage vessel is empty shall be shown. [A.A.C. R18-2-710.E.1]
- b. The Permittee shall record the average monthly temperature and true vapor pressure of gasoline at such temperature if the true vapor pressure is greater than 470 mm Hg (9.1 psia) and the gasoline is stored in a storage vessel other than one equipped with a vapor recovery system or its equivalent. [A.A.C. R18-2-710.E.2.b]
- c. The average monthly storage temperature shall be an arithmetic average calculated for each calendar month, or portion thereof, if storage is for less than a month, from bulk liquid storage temperatures determined at least once every seven days. [A.A.C. R18-2-710.E.3]
- d. The true vapor pressure shall be determined by the procedures in American Petroleum Institute Bulletin 2517, amended as of February 1980 (and no future editions), which is incorporated herein by reference and on file with the Office of the Secretary of State. This procedure is dependent upon determination of the storage temperature and the Reid vapor pressure, which requires sampling of the petroleum liquids in the storage vessels. Unless the Director requires in specific cases that the stored petroleum liquid be sampled, the true vapor pressure may be determined by using the average monthly storage temperature and the typical Reid vapor pressure. For those liquids for which certified specifications limiting the Reid vapor pressure exist, the Reid vapor pressure may be used. For other liquids, supporting analytical data must be made available upon request to the Director when typical Reid vapor pressure is used. [A.A.C. R18-2-710.E.4]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-710.B, D, E.1, E.2.b, E.3 and E.4. [A.A.C. R18-2-325]

VIII. FUGITIVE DUST SOURCES

This Section applies to any source of fugitive dust in the facility.

A. Emission Limitations/Standards

1. Opacity of emissions from any non-point shall not be greater than 40 percent measured in accordance with the Arizona Testing Manual, Reference Method 9. [A.A.C. R18-2-614]

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2. The Permittee shall not cause, allow or permit visible emissions from any point source, in excess of 20 percent opacity. [A.A.C-R18-2-702.B]
3. The Permittee shall employ the following reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne:
 - a. Keep dust and other types of air contaminants to a minimum in an open area where construction operations, repair operations, demolition activities, clearing operations, leveling operations, or any earth moving or excavating activities are taking place, by good modern practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping, continuous wetting, detouring, barring access, or other acceptable means; [A.A.C. R18-2-604.A]
 - b. Keep dust to a minimum from driveways, parking areas, and vacant lots where motor vehicular activity occurs by using an approved dust suppressant, or adhesive soil stabilizer, or by paving, or by barring access to the property, or by other acceptable means; [A.A.C. R18-2-604.B]
 - c. Keep dust and other particulates to a minimum by employing dust suppressants, temporary paving, detouring, wetting down or by other reasonable means when a roadway is repaired, constructed, or reconstructed; [A.A.C. R18-2-605.A]
 - d. Keep dust and other particulates to a minimum by employing reasonable precautions, such as wetting, applying dust suppressants, or covering the load when transporting material likely to give rise to airborne dust; [A.A.C. R18-2-605.B]
 - e. Keep dust and other particulates to a minimum by employing reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods when crushing, handling, or conveying material likely to give rise to airborne dust; [A.A.C. R18-2-606]
 - f. The Permittee shall not cause, suffer, allow, or permit organic or inorganic dust producing material to be stacked, piled, or otherwise stored without taking reasonable precautions such as chemical stabilization, wetting, or covering to prevent excessive amounts of particulate matter from becoming airborne. [A.A.C. R18-2-607.A]
 - g. Stacking and reclaiming machinery utilized at storage piles shall be operated at all times with a minimum fall of material and in such manner, or with the use of spray bars and wetting agents, as to prevent excessive amounts of particulate matter from becoming airborne. [A.A.C. R18-2-607.B]
 - h. The Permittee shall not cause, suffer, allow, or permit construction of mineral tailing piles without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Reasonable precautions shall mean wetting, chemical stabilization, revegetation or such other measures as are approved by the Director. [A.A.C. R18-2-608]
 - i. Any other method as proposed by the Permittee and approved by the Director. [A.A.C. R18-2-306.A.2]

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B. Air Pollution Control Requirements

Haul Roads and Storage Piles

Water, or an equivalent control, shall be used to control visible emissions from haul roads and storage piles.

[A.A.C. R-18-2-306.A.2 and -331.A.3.d]

[Material Permit Condition is indicated by underline and italics]

C. Monitoring , Recordkeeping and Reporting Requirements

1. The Permittee shall keep records of the dates on which any of the activities listed in Conditions VIII.A.3.a through i of this Attachment are performed and the control measures employed. [A.A.C. R18-2-306.A.3.c]

2. As an alternative to C.1 above, the Permittee may follow the approved Monitoring Plan as a means of monitoring and recordkeeping for any of the activities listed in Conditions VIII.A.3.a through i of this Attachment. [A.A.C. R18-2-306.A.3.c]

3. Any changes in the approved Monitoring Plan shall be recorded, and a notification shall be sent to the Director within 10 days following the change. [A.A.C. R18-2-306.A.3.c]

4. Visible Emissions Monitoring

a. The Permittee shall follow the approved visual observation plan for visible emissions monitoring from all fugitive dust sources. [A.A.C. R18-2-306.A.3.c]

b. A certified Method 9 observer shall conduct a bi-weekly (once every two weeks) visual survey of visible emissions from all fugitive dust sources when they are in operation in accordance with the observation plan. The Permittee shall keep a record of the name of the observer, the date on which the observation was made, and the results of the observation. [A.A.C. R18-2-306.A.3.c]

c. If the observer sees a visible emission that on an instantaneous basis appears to exceed the applicable opacity standard, then the observer shall, if possible, take a six-minute EPA Method 9. [A.A.C. R18-2-306.A.3.c]

d. If the six-minute opacity of the visible emission is less than the applicable opacity standard, the observer shall make a record of the following:

i. Location, date, and time of the observation; and

ii. The results of the Method 9 observation.

[A.A.C. R18-2-306.A.3.c]

e. If the six-minute opacity of the visible emission exceeds the applicable opacity standard, then the Permittee shall do the following:

i. Adjust or repair the controls or equipment to reduce opacity to or below the applicable standard; and

ii. Report it as an excess emission for opacity under Section XI.A of Attachment A.

[A.A.C. R18-2-306.A.3.c]

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- f. Any changes to the observation plan, originally approved by the Department, shall be made only with the prior approval of the Director.

[A.A.C. R18-2-306.A.3.c]

D. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with the following applicable provisions as of the issuance date of this permit: A.A.C. R18-2-604A, A.A.C. R18-2-604B, A.A.C. R18-2-605, A.A.C. R18-2-606, A.A.C. R18-2-607, A.A.C. R18-2-608, A.A.C. R18-2-614, and A.A.C. R18-2-702.B.

[A.A.C. R18-2-325]

IX. MOBILE SOURCES

The requirements of this section are applicable to mobile sources which either move while emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or agricultural equipment used in normal farm operations. Mobile sources shall not include portable sources as defined in A.A.C. R18-2-101.90.

[A.A.C. R18-2-801.A]

A. Emission Limitations/Standards

1. Unless otherwise specified, no mobile source shall emit smoke or dust the opacity of which exceeds 40%.
[A.A.C. R18-2-801.B]
2. Off Road Machinery
 - a. The Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any off-road machinery smoke for any period greater than ten consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes.
[A.A.C. R18-2-802.A]
 - b. Off-road machinery shall include trucks, graders, scrapers, rollers, locomotives and other construction and mining machinery not normally driven on a completed public roadway.
[A.A.C. R18-2-802.B]
3. Roadway and Site Cleaning Machinery
 - a. The Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than ten consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes.
[A.A.C. R18-2-804.A]
 - b. In addition to complying with IX.A.3.a, the Permittee shall not cause, allow or permit the cleaning of any site, roadway or alley without taking reasonable precautions to prevent particulate matter from becoming airborne. Reasonable precautions may include applying dust suppressants. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means.
[A.A.C. R18-2-804.B]

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B. Permit Shield

Compliance with the Conditions of this Section shall be deemed compliance with the following applicable provisions as of the issuance date of this permit: A.A.C. R18-2-801, A.A.C. R18-2-802 and A.A.C. R18-2-804. [A.A.C. R18-2-325]

X. OTHER PERIODIC ACTIVITY REQUIREMENTS

A. Abrasive Blasting

Particulate Matter and Opacity

1. Emission Limitations/Standards

a. The Permittee shall not cause or allow sandblasting or other abrasive blasting without minimizing dust emissions to the atmosphere through the use of good modern practices. Good modern practices include:

- i. Wet blasting;
- ii. Effective enclosures with necessary dust collecting equipment;
- iii. Copper slag based material; or
- iv. Any other method approved by the Director.

[A.A.C. R18-2-726]

b. Opacity

The Permittee shall not cause, allow or permit visible emissions from sandblasting or other abrasive blasting operations in excess of 20% opacity, as measured by EPA Reference Method 9. [A.A.C. R18-2-702.B]

2. Monitoring and Recordkeeping Requirement

Each time an abrasive blasting project is conducted, the Permittee shall log in ink or in an unchangeable electronic format, a record of the following:

- a. The date the project was conducted;
- b. The duration of the project; and
- c. Type of control measures employed.

[A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-726, A.A.C. R18-2-702.B. [A.A.C. R18-2-325]

B. Use of Paints

1. Volatile Organic Compounds

a. Emission Limitations/Standards

While performing spray painting operations, the Permittee shall comply with

the following requirements:

- i. The Permittee shall not conduct or cause to be conducted any spray painting operation without minimizing organic solvent emissions. Such operations, other than architectural coating and spot painting, shall be conducted in an enclosed area equipped with controls containing no less than 96 percent of the overspray. [A.A.C.R18-2-727.A]

- ii. The Permittee or their designated contractor shall not either:
 - (a) Employ, apply, evaporate, or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or
 - (b) Thin or dilute any architectural coating with a photochemically reactive solvent. [A.A.C.R18-2-727.B]

- iii. For the purposes of Conditions X.B.1.a.ii and X.B.1.a.v of this Attachment, a photochemically reactive solvent shall be any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified in Conditions X.B.1.a.iii(a) through X.B.1.a.iii(c) below, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:
 - (a) A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation-hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones: 5 percent.
 - (b) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent.
 - (c) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent. [A.A.C.R18-2-727.C]

- iv. Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups of organic compounds described in Conditions X.B.1.a.iii(a) through X.B.1.a.iii(c) above, it shall be considered to be a member of the group having the least allowable percent of the total volume of solvents. [A.A.C.R18-2-727.D]

b. **Monitoring and Recordkeeping Requirements**

- i. Each time a spray painting project is conducted, the Permittee shall log in ink, or in an unchangeable electronic format, a record of the following:
 - (a) The date the project was conducted;
 - (b) The duration of the project;

- (c) Type of control measures employed;
- (d) Material Safety Data Sheets for all paints and solvents used in the project; and
- (e) The amount of paint consumed during the project.

ii. Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of Condition IX.B.1.b.i above.
[A.A.C. R18-2-306.A.3.c]

c. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C.R18-2-727.
[A.A.C.R18-2-325]

2. Opacity

a. Emission Limitation/Standard

The Permittee shall not cause, allow or permit visible emissions from spray-painting operations in excess of 20% opacity, as measured by EPA Reference Method 9.
[A.A.C. R18-2-702.B]

b. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C.R18-2-702.B.
[A.A.C. R18-2-325]

C. Demolition/Renovation - Hazardous Air Pollutants

1. Emission Limitation/Standard

The Permittee shall comply with all of the applicable requirements of 40 CFR 61 Subpart M (National Emissions Standards for Hazardous Air Pollutants - Asbestos).
[A.A.C. R18-2-1101.A.8]

2. Monitoring and Recordkeeping Requirement

The Permittee shall keep all required records in a file. The required records shall include the “NESHAP Notification for Renovation and Demolition Activities” form and all supporting documents.
[A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-1101.A.8.
[A.A.C. R18-2-325]

ATTACHMENT “C”: EQUIPMENT LIST
Air Quality Control Permit No. 41526
 For
Phelps Dodge Miami Mine

Equipment ID	Description	Size	Serial Number	Make/Model	Date of Manufacture /Installation
P1	Tankhouse Boiler 1	34 Million BTU/hr	L2208	Cleaver Brooks D-42	3/1989
P2	Tankhouse Boiler 2	34 Million BTU/hr	WL-2210	Cleaver Brooks D-42	3/1989
P3	Tankhouse Boiler 3	32 Million BTU/hr	J21	Johnston PFTY800-4LG150S	1997
BCW00169	Emergency Generator	750 kw	N/A	Caterpillar/ 3412 Dista packaged	N/A
BCW00406	Emergency Generator	750 kw	N/A	Caterpillar/ 3412 Dista packaged	N/A
P4	Propane Water Heater	1Million BTU/hr	9612082	Sioux D1000	1996
P5	Lead Melting Pot	0.63 Million BTU/hr	N/A	N/A	N/A
-	Miscellaneous Heaters	4.26 Million BTU/hr	N/A	N/A	N/A

STORAGE TANKS

Tank	Tank No.	Capacity
Gasoline	707MT25, 707MT26	10000 gal each
Diesel	707MFUELI	54000 gal
SX surge tanks	1 & 2	60000 gal each
Diluent storage tank		30000 gal
Grungee storage tank		11000 gal
Acid storage	10822, 10821	10,000 tons each
Ammonium nitrate silos (2)	707MBPS020	80,000 Lbs Each
Organic surge tanks (2)	11142	80000 gal each
Mixer settler tanks	11129-32, 11262-65	119,700 gal each
Electrolyte surge tanks	11145,50,11278, 11283	25,000 gal each
Electrowinning cells tank house	50036, 50028, 39825	3,675 gal each
Electrolyte storage tanks (2)	MIT750RESV	375000 gal each